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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/965,038	09/26/2001	Bryan K. Casper	42390.P11208	2574

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EXAMINER

HA, DAC V

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/965,038

Applicant(s)

CASPER, BRYAN K.

Examiner

Dac V. Ha

Art Unit

2634

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 September 2001.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-21 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 1-21** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recitation "n" in independent claims 1, 9, 1, 19 must be clearly defined (i.e., natural number).

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1, 4, 5, 8, 17, 18, 19** are rejected under 35 U.S.C. 102(b) as being anticipated by Chan et al. (US 5,412,689) (hereinafter Chan).

**Regarding claim 1**, Chan teaches the followings:

"a set of transmission line ... n" (Figure 2, element 22; Col. 5, line 21);

"a set of receivers ... n" (Figure 5, element 72; Col. 8, line 30);

"a set of drivers ... n" (Figure 2, element 30; Col. 5, line 53);

"a mapper ... i" (Figure 2, element 26; Col. 2, lines 9-30; Col. 3, line 56 to Col. 5, line 55; Col. 6, line 3 to Col. 8, line 23).

**Regarding claim 4**, Chan further teaches the claimed subject matter "wherein ... i" in Col. 4, lines 49-57.

**Regarding claim 5**, Chan further teaches the claimed subject matter "wherein ... i" in Col. 8, line 30 to Col. 9, line 17.

**Regarding claim 8**, see claim 4.

**Regarding claim 17**, Chan teaches:

"mapping ... i" (Figure 2, element 26; Col. 2, lines 9-30; Col. 3, line 56 to Col. 5, line 55; Col. 6, line 3 to Col. 8, line 23);

"a set of transmission line ... n" (Figure 2, element 22; Col. 5, line 21,53-55).

**Regarding claim 18**, Chan further teaches the claimed subject matter "receiving ... i" in Figure 5, element 72; Col. 8, line 30.

**Regarding claim 19**, Chan teaches:

"a set of drivers ... n" (Figure 2, element 30; Col. 5, line 21,53-55);

"a mapper ... i" (Figure 2, element 26; Col. 2, lines 9-30; Col. 3, line 56 to Col. 5, line 55; Col. 6, line 3 to Col. 8, line 23).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 2, 3, 6, 7, 9-16, 20-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over Chan.

Art Unit: 2634

**Regarding claim 9**, Chan teaches all the claimed subject matter in claim 9 (as applied to claim 1 above), except for the claimed subject matter "a first die" and "a second die". However, these claimed subject matter would have been obvious to one skilled in the art since the electronic components disclosed in Chan would have been fabricated using integrated circuit, a method of choice today.

**Regarding claim 2**, Chan teaches all the claimed subject matter in claim 9, as applied to claim 1 above, except for the claimed subject matter "a table ... the table". Chan utilizes matrix for producing corresponding encoded signal from signal to be transmitted (col. 4, line 5 to col. 5, line 20). Therefore, the claimed subject matter "a table ... stored in the table" would have been design option to one skilled in the art.

**Regarding claim 3**, similar reasoning applied to claim 2, the claimed subject matter "a finite machine ... a word" would have been optional to one skilled in the art.

**Regarding claims 6, 7**, see claims 2, 3.

**Regarding claims 10-16**, see claims 2-8.

**Regarding claims 20-21**, see claims 2-3.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Perino et al. (US 6,504,875) disclose an Apparatus For Multilevel Signaling.

Mansur (US 6,226,330) discloses Eigen-Mode Endoding Of Signals In A Data Group.

Costello (US 5,160,929) discloses System For Parallel Communication Of Binary Data Via Trinary Transmission Lines.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dac V. Ha whose telephone number is 703-306-5536. The examiner can normally be reached on 5/4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dac V. Ha  
Examiner  
Art Unit 2634